

(g) applying said paste formed in step (e) on silks for pollination;

and

(h) selecting for transformants.

2. (Amended) The method of Claim 1, wherein said silicon fibers used in step (a) are approximately 0.1-20 μm in diameter and 1-250 μm in length, and more preferably between 1-2 μm in diameter and 10-80 μm in length.

4. (Amended) The method of Claim 1 wherein the solution of silicon carbide fibers prepared in step (a) comprises a sufficient amount of sterile water or solvent, to make a 5% to 25% aqueous solution.

6. (Amended) The method of Claim 1 wherein the pollen germination medium contains about 5% - 15% sucrose, 0.01% - 1.0% H_3BO_3 , 0.01% to 1.0% $\text{Ca}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$ at pH 5.6, and more preferably, about 15% sucrose, 0.018% H_3BO_3 , 0.04% $\text{Ca}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$ at pH 5.6.

8. (Amended) The method of Claim 1 wherein said DNA is a plasmid DNA.

9. (Amended) The method of Claim 8, wherein said plasmid DNA is dissolved in a Tris EDTA solution.

11. (Amended) The method of Claim 1, wherein the selection of a transformant is performed by using specific cloned selectable markers selected from the group consisting of antibiotics and herbicides.

12. (Amended) The method of Claim 11, wherein said selectable marker having a phenotypic expression is a gene regulating anthocyanin levels.
13. (Amended) The method of Claim 11, wherein said selectable gene marker is a gene providing resistance to at least one antibiotic.
14. (Amended) The method of Claim 11, wherein said selectable marker is a gene providing resistance to neomycin phosphotransferase.
15. (Amended) The method of Claim 11, wherein said selectable marker is a gene providing resistance to kamamycin.
16. (Amended) The method of Claim 11, wherein said selectable marker is a gene providing resistance to phosphinothriun acetyltransferase.
17. (Amended) The method of Claim 1 wherein the plants are selected from the group consisting of flowering plants and gymnosperms.
18. (Amended) The method of Claim 17, wherein said flowering plants include monocots.
19. (Amended) The method of Claim 18, wherein said monocot is maize.
20. (Amended) The method of Claim 17, wherein said flowering plants include dicots.
21. (Amended) The method of Claim 20, wherein said dicots include melon or tomato.

22. (Amended) The method of Claim 17, wherein said gymnosperm includes pine.

31. (New) A method for genetic transformation of maize reproducing sexually, said method comprising of a pollination-fecundation process and comprising the steps of:

- (a) preparing a silicon carbide fiber solution;
- (b) preparing a pollen germination medium;
- (c) preparing a DNA solution;
- (d) mixing said silicon carbon fibers with pollen germination medium and said DNA solution to form a mixture;
- (e) adding fresh pollen into said mixture to form a paste;
- (f) vortexing said paste for 30 to 60 seconds;
- (g) applying said past formed in step (e) on silks for pollination;
and
- (h) selecting for transformants.

32. (New) The method of Claim 31, wherein said silicon fibers used in step (a) are approximately 0.1-20 μm in diameter (and 1-250 μm in length, and more preferably between 1-2 μm in diameter) and 10-80 μm in length.

33. (New) The method of Claim 31 wherein the solution of silicon carbide fibers prepared in step (a) comprises a sufficient amount of sterile water or solvent, to make a 5% to 25% aqueous solution.

34. (New) The method of Claim 31 wherein the pollen germination medium contains about 5% - 15% sucrose, 0.01% - 1.0% H_3BO_3 , 0.01% to 1.0% $\text{Ca}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$ at pH 5.6, and more preferably, about 15% sucrose, 0.018% H_3BO_3 , 0.04% $\text{Ca}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$ at pH 5.6.

35. (New) The method of Claim 31 wherein said DNA is a plasmid DNA.

36. (New) The method of Claim 35, wherein said plasmid DNA is dissolved in a Tris EDTA solution.

37. (New) The method of Claim 31, wherein the selection of a transformant is performed by using specific cloned selectable markers selected from the group consisting of antibiotics and herbicides.

38. (New) The method of Claim 37, wherein said selectable marker is a gene providing resistance to neomycin phosphotransferase.

39. (New) The method of Claim 37, wherein said selectable marker is a gene providing resistance to kamamycin.

40. (New) The method of Claim 37, wherein said selectable marker is gene providing resistance to phosphinothriun acetyltransferase.